REMARKS

Claims 1 and 3-32 are pending in this application. By this Amendment, claims 23-24 are amended for clarity and new claims 28-32 are added. Various amendments are made to the claims for clarity and are unrelated to issues of patentability.

The Office Action rejects claims 1, 3-8, 11-17 and 20-27 under 35 U.S.C. §102(e) by U.S. Patent 6,058,136 to Ganesh. The Office Action also rejects claims 9 and 18 under 35 U.S.C. §103(a) over Ganesh in view of U.S. Patent 6,061,338 to O. Finally, the Office Action rejects claims 10 and 19 under 35 U.S.C. §103(a) over Ganesh in view of U.S. Patent 6,519,237 to McDonough. The rejections are respectfully traversed.

Independent claim 1 recites determining a non-orthogonality among each downlink physical channel, differently deciding each transmission starting point of the each physical channel from the base station, if the non-orthogonality is determined to exist among the physical channels, and transmitting the downlink data through the each physical channel having a different transmission starting point from the base station.

Ganesh does not teach or suggest these features of independent claim 1. That is, Ganesh relates to a method for assigning pseudo-noise (PN) offsets to CDMA signals. That is, the respective sections cited in the Office Action, such as col. 4, lines 8-22 and col. 8, lines 3-63 merely relate to a PN offset being assigned. However, as is clearly set forth in col. 1, lines 32-36, each of the forward CDMA channels (from the base station to the mobile unit) is orthogonally spread by a Walsh function and then spread by the PN sequences. Ganesh does not relate to determining non-orthogonality. Further, Ganesh's PN offsets do not relate to non-orthogonality

among downlink physical channels. At no point does Ganesh discuss determining non-orthogonality among each downlink physical channel. Accordingly, Ganesh does not teach or suggest various claimed features including differently deciding each transmission starting point of the each physical channel from the base station, if the non-orthogonality is determined to exist among the physical channels. Accordingly, independent claim 1 defines patentable subject matter at least for this reason.

Each of independent claims 3, 11, 13, 20 and 23 define patentable subject matter for at least similar reasons as claim 1. That is, independent claim 3 recites determining a non-orthogonality among each downlink physical channel through a same frequency bandwidth and differently deciding each transmission starting point of the each physical channel from a base station, if the non-orthogonality is determined to exist among the downlink physical channels. For at least the reasons set forth above, Ganesh does not teach or suggest these features. Thus, independent claim 3 defines patentable subject matter.

Independent claim 11 recites a first group of physical channels maintaining orthogonality due to the Walsh function using a same quasi-orthogonal function (QOF) having equivalent chip transmission starting points from a base station, while a second group of physical channels not maintaining orthogonality due to use of a different quasi-orthogonal function (QOF) have different chip transmission starting points from the base station, wherein each of the physical channels of the second group has a different starting point.

The Office Action has not specifically addressed all the features of independent claim 11. That is, independent claim 11 specifically recites a first group of physical channels maintaining

orthogonality and a second group of physical channels not maintaining orthogonality. These features have not been addressed in the Office Action. Furthermore, Ganesh does not teach or suggest these features of independent claim 11. Accordingly, independent claim 11 defines patentable subject matter.

Independent claim 13 recites determining starting times of transmitting data on the downlink physical channels, when the specific codes of the physical channels are non-orthogonal with one another, wherein the starting time of one physical channel from the base station is different from the starting time of another physical channel from the base station. For at least the reasons set forth above, independent claim 13 defines patentable subject matter.

Independent claim 20 recites examining indices of the quasi-orthogonal functions for each physical channel, and determining starting times of transmitting data on the downlink physical channels, when indices indicate that the quasi-orthogonal functions are non-orthogonal with one another, wherein the starting time of one physical channel from the base station is different from the starting time of another physical channel from the base station and transmitting the data on the downlink physical channels at the determined starting times. For at least the reasons set forth above, independent claim 20 defines patentable subject matter.

Independent claim 23 scrambling and transmitting first data on a first physical channel from the base station by a first scrambling code, scrambling and transmitting second data on a second physical channel from a base station by a second scrambling code, and wherein a chip synchronization on the first physical channel and on the second physical channel is not made. For at least the reasons set forth above, independent claim 23 defines patentable subject matter.

Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references. For example, dependent claim 28 recites transmitting downlink data through other ones of the physical channels at a same transmission starting point if orthogonality exists among the other ones of the physical channels. For at least the reasons set forth above with respect to claim 11, Ganesh and the other applied reference do not teach or suggest these features. Thus, dependent claim 28 (and similarly dependent claims 29-32) defines patentable subject matter at least for this additional reason.

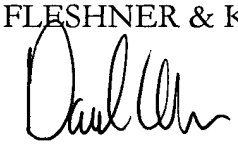
Additionally, dependent claim 29 recites transmitting data on other ones of downlink physical channels at a same starting time if orthogonality exists among the other ones of the downlink physical channels. Ganesh and the other applied references do not teach or suggest these features. Thus, dependent claim 29 defines patentable subject matter at least for this additional reason.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1 and 3-32 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, **David C. Oren**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
FLESHNER & KIM, LLP



David C. Oren
Registration No. 38,694

P.O. Box 221200
Chantilly, Virginia 20153-1200
(703) 766-3701 DYK:DCO/krf
Date: September 30, 2005
Please direct all correspondence to Customer Number 34610